Abstract of the Disclosure:

In a method for operating an MRAM semiconductor memory configuration, for the purpose of reading an item of stored information, reversible magnetic changes are made to the TMR cell and a current that is momentarily altered as a result is compared with the original read signal. As a result, the TMR memory cell itself can serve as a reference, even though the information in the TMR memory cell is not destroyed, i.e. writing-back does not have to be effected. The method can preferably be applied to an MRAM memory configuration in which a plurality of TMR cells are connected, in parallel, to a selection transistor and in which there is a write line which is not electrically connected to the memory cell.

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